

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with atty. Jeffrey Huter on 10-26-2009. Upon reviewing the case, the examiner believed that Paras. 41-44 of the specification (2003/0109302 A1) discussing the determination of the rejection rate was the most significant passage relating as to what the claims as a whole were trying to do. No mention in the closest prior art, cited in the last rejection, is made of tying this rejection rate to a malfunction for the machine. Mr. Huter subsequently e-mailed proposed amendments along these lines for entry by examiner's amendment. On 11-04-2009, the examiner received verbal permission to change "rating" in claims 21, 22, 23, and 27 to "rate" for more consistent terminology, and to change claim 22's dependency from 21 to 19, and 23's dependency from 22 to 19, as 21, 22, and 23 are separate dependent claims specifying different ranges.. The application has been amended as follows:

19. (Currently Amended) A gaming machine comprising:

a bill acceptor configured to receive bills tendered, the bill acceptor comprising a sensor configured to evaluate each received bill and to output a signal indicative of one of an acceptance and a rejection of the received bill;

an annunciator having an array of illuminating elements configured to be illuminated in first, second, and third illuminating patterns, the first illuminating pattern being different from the second illuminating pattern, the second illuminating pattern being different from the third illuminating pattern, and the first illuminating pattern being different from the third illuminating pattern; and

a controller having a first counter and a second counter, the controller configured to

- increment the first counter on each occurrence of an acceptance signal,
- increment the second counter on each occurrence of a rejection signal,
- determine a bill acceptance rate based upon a ratio of a count of the first counter to a sum comprising respective counts of using the first and second counters,
- detect a malfunction of the bill acceptor based upon the bill acceptance rate,
- sequentially energize the array of illuminating elements in the first, second, and third patterns repetitively to indicate that a malfunction of the bill acceptor has not been detected, and

sequentially energize the array of illuminating elements in the first, second, third, and second patterns repetitively to indicate a malfunction of the bill acceptor has been detected.

21. (Currently Amended) The gaming machine of claim 19, wherein the controller is configured to detect a malfunction of the bill acceptor in response to the bill acceptance rate falling below a value, and the value is at most about 90 percent.

22. (Currently Amended) The gaming machine of claim 19, wherein the controller is configured to detect a malfunction of the bill detector in response to the bill acceptance rate falling below a value, and the value is at most about 80 percent.

23. (Currently Amended) The gaming machine of claim 19, wherein the controller is configured to detect a malfunction of the bill detector in response to the bill acceptance rate falling below a value, and the value is at most about 70 percent.

27. (Currently Amended) A method of operating a bill acceptor of a gaming machine, the gaming machine including an annunciator represented by an array of illuminating elements, the method comprising:

receiving a bill at the bill acceptor;

sensing at least one characteristic of the received bill;

generating one of an acceptance signal and a rejection signal using the at least one sensed characteristic;

incrementing a respective one of an acceptance counter and a rejection counter based on the respective acceptance and rejection signals;

determining a bill acceptance rate of the bill acceptor based on dividing a cumulated value of the acceptance counter by a sum comprising respective cumulated values of the acceptance and rejection counters;

detecting a malfunction of the bill acceptor in response to the bill acceptance [rating] rate falling below a value

automatically, repetitively, and sequentially activating a plurality of illuminating elements in first, second, and third patterns, the first illuminating pattern being different from the second illuminating pattern, the second illuminating pattern being different from the third illuminating pattern, and the first illuminating pattern being different from the third illuminating pattern in response to not detecting a malfunction of the bill acceptor;

and

automatically, repetitively, and sequentially activating the plurality of illuminating elements in first, second, third, and second patterns in response to detecting a malfunction of the bill acceptor.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: The closet prior art is Hand (U.S. pre-grant publication 2002/0125627 A1) and Winters (provisional application 60/337,409, published as 7,014,029 B2 and 2003/0111316 A1). Hand teaches a bezel and bill acceptor for a gaming machine. Fig. 3 shows the various indicator lights on the bezel. Para. 4 of Hand's background discusses runway lighting patterns indicating the direction in which the bill is to be inserted. Para. 18 of Hand discusses bill validation. No teaching is made in hand about the claimed acceptance and rejection counters determining a bill acceptance rate. Hand in Para. 21 discusses a bill rejection indicator 52, a system lock indicator 54, a counterfeit bill indicator, 56, a transport jam indicator 58, a service indicator 60, a diagnostic indicator 62, a coin indicator 64, a machine service indicator 66, and a validator not box full indicator 68. The indicators 54, 58, 60, 62, 66, and 68 indicating that the gaming machine may need some service are not tied to a bill rejection rate or acceptance and rejection counters as claimed. The bill rejection indicator 52 and counterfeit bill indicator 56 do not indicate anything is wrong with the machine and are not tied to acceptance and rejection counters as claimed. The runway lighting pattern of Hand's background is not tied to acceptance or rejection counters as claimed and is not used to indicate that the machine needs service or not, as do the claimed repeated first, second, and third patterns and repeated first, second, third, and second patterns. Winters at Page 5 and Fig. 1 (102) logs a ratio of false coins to the sum of false plus real coins to determine a coin rejection rate. If the rate exceeds a certain amount, a log entry can be made,

personnel can be notified over a phone network, all subsequent coins of a particular type can be rejected, or the transaction can be halted (Pages 5 and 6). The acceptance and rejection counters of Winters are not used to determine if there is anything wrong with the gaming machine, only to detect and stop fraud. The acceptance and rejection counters of Winters are also not tied to repeated first, second, and third patterns and repeated first, second, third, and second patterns as claimed. The examiner believes that the nexus between the repeated patterns and the acceptance and rejection counters is important. In the event the bill acceptance rate is acceptable, the bezel lights will flash in repeated first, second, and third patterns. In the event the bill acceptance rate is not acceptable, the bezel lights will flash in repeated first, second, third, and second patterns. Such a change in pattern is subtle and will not be noticed by all but the most alert game players. This subtle change would have the advantage of indicating to casino personnel that the machine needs to be serviced, without unduly alarming the player, as Hand's indicators 54, 58, 60, 62, 66, and 68 would clearly indicate to players that something is wrong with the machine. This might cause players to stop playing the machine when in fact there is nothing wrong with the machine, such as in the event the player is merely playing with worn bills. In this situation, the casino personnel could make a "courtesy check" of the machine and allow the player to continue playing if nothing is indeed wrong with the machine. This would also have the advantage of preventing individual gaming machines from unduly receiving reputations among the players as bad machines that constantly need service. The use of the acceptance and rejection counters in conjunction with the claimed lighting patterns, as

in the independent claims, to detect problems with the gaming machines and not only to detect possible fraud has the advantage of indicating that the bill acceptor's feeding mechanisms need to be repaired or that the bill acceptor's sensors need to be repaired or replaced, as problems of these sorts could cause rejection rates that are too high. Again, these problems would be unobtrusively indicated to casino personnel who could remedy the problem after the players are done playing (if no fraud is suspected), without any interruption to the players' session. The dependent claims 30 and 31 have the added advantage of providing an intuitive indication to the player of the direction in which the bills are to be inserted into the bill acceptor. This would serve to prevent confusion to players new to the machine and reduce the likelihood of jammed bills. The rejection ratio will necessarily be a ratio of the rejected bills to the total number of bills (sum of accepted bills plus rejected bills); this amendment was thus clarifying and not limiting of the independent claims. The examiner respects that the applicant may have different reasons for allowance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oki, et al. in U.S. patent 6,641,034 B1 teach a lighted bezel.

Neborsky, et al. in U.S. patent 6,247,572 B1 teach a bill validator. Acres, et al. in U.S. patent 6,162,122 A teach a lighted bezel. Itako in U.S. patent 5,970,165 A teaches bill validation. Halic in U.S. patent 5,700,195 A teaches a bill validator. Allan, et al. in U.S. patent 5,931,277 A teach tolerances for bill validation. Ishida, et al. in U.S. pre-grant publication 2001/0013456 A1 teach ratios of old and new coins. Baudat, et al. in U.S. patent 6,899,215 B2 teach mathematical functions for bill validation. Heidel in U.S. patent 6,742,644 B1 teaches a gaming bill validator.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Hoel whose telephone number is (571) 272-5961. The examiner can normally be reached on Mon. to Fri., 8:00 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (571) 272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Matthew D. Hoel
Patent Examiner
AU 3714

Peter Vo
Supervisory Patent Examiner
Art Unit 3714

/M. D. H./
Examiner, Art Unit 3714

/Peter DungBa Vo/
Supervisory Patent Examiner, Art Unit 3714